Today's Learning Goal(s):

By the end of the class, I will be able to:

- a) factor a "Perfect-Square Trinomial".
- b) factor a "Difference of Squares".

2.5 Factoring Quadratic Expressions: Special Cases

MCF 3MI

(Every lesson)

Ex.1 Factor completely (over the integers).

a)
$$x^2 + 12x + 36$$

b)
$$9x^2 - 12x + 4$$

a)
$$x^2 + 12x + 36$$
 b) $9x^2 - 12x + 4$ c) $25x^2 - 70x + 49$

Note: The above examples are all "perfect-square trinomials".

They can be recognized by:

Ex.2 Factoring a "Difference of Squares".

They can be recognized by:

a)
$$x^2 - 1$$

b)
$$x^2 - 81$$

a)
$$x^2 - 1$$
 b) $x^2 - 81$ c) $4x^2 - 9y^2$ d) $4 - 9x^2$

d)
$$4 - 9x^2$$

Ex.2 Factoring a "Difference of Squares".

They can be recognized by:

a)
$$x^2 - 1$$

b)
$$x^2 - 81$$

a)
$$x^2 - 1$$
 b) $x^2 - 81$ c) $4x^2 - 9y^2$ d) $4 - 9x^2$

d)
$$4 - 9x^2$$

Ex.3 Factor completely (over the integers).

a)
$$12 - 48x^2$$

b)
$$25y^6 - 100$$

c)
$$4xy - 16xy^3$$

a)
$$12 - 48x^2$$
 b) $25y^6 - 100$ c) $4xy - 16xy^3$ d) $-8x^2 + 24x - 18$

Practice: pp. 115-116 # 3, 4abde, 11

READ pp. 118-119 pp. 120-121 # 9, 13, 16, 18